

REMARKS

The Office Action of October 13, 2006, has been reviewed and these remarks are responsive thereto. Claim 1 has been amended, no claims have been canceled, and no new claims have been added. Claims 1-30 remain pending in this application. Reconsideration and allowance of the instant application are respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 1, 2, 9, 11, 12, 18, 19, 24, 25, 29, and 30 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,098,894 to Yang et al. (*Yang*). Applicants respectfully traverse for at least the following reasons.

Claims 1, 2, 9, 11, 12, 18, and 19

Amended claim 1 recites, “an image projection system configured to display an image on the supporting surface adjacent to, outside of, and away from the lower periphery of the computer input device.” (Emphasis added.) *Yang* discloses a pen type optical mouse device that operates by projecting light onto a surface and then detecting the light reflected back from the surface, in order to determine cursor position and/or detect movement of the device on the surface. (Fig. 15; Fig. 19; Abstract; col. 4, line 60 to col. 5, line 4.) In order for *Yang*’s device to function for these purposes, the light must be projected onto the surface towards the image sensor and the lower periphery of the device, so that the reflected light can be captured. (See, e.g., Figs. 15 and 19.) Thus, *Yang* does not disclose displaying an image “away from the lower periphery of the computer input device” as recited in amended claim 1, nor is it adaptable to do so while achieving its purposes as a pen type optical mouse device. Accordingly, and for at least these reasons, amended claim 1 is not anticipated by *Yang*. Claims 2, 9, 11, 12, 18, and 19 depend from claim 1 and are allowable for at least the same reasons, as well as based on the additional features recited therein.

Claims 24 and 25

Claim 24 recites, in part, “a movable image forming element located within the housing.” The Office Action alleges on page 3 that *Yang* teaches a movable image forming element in Fig. 15, elements 31-33. However, in contrast to the invention as recited in claim 1, Applicants

respectfully note that *Yang's* imaging system (31-33) is not movable. Neither the cited figures and passages, nor any other portion of *Yang*, discloses or even suggests that the imaging system (31-33) is movable. Applicants further note that if *Yang's* imaging system (31-33) were movable, this movement would only serve to frustrate *Yang's* primary purpose of detecting device movement across a surface. *Yang's* imaging system must be non-movable so that any detected movement in the reflected light captured by the image sensor can be attributed to movement of the device across the surface. Accordingly, because *Yang* does not disclose or even suggest "a movable image forming element located within the housing," claim 24 is also not anticipated by *Yang*. Claim 25 depends from claim 24 and is allowable for at least the same reasons.

Claims 29 and 30

Claim 29 recites, in part, "projecting a first image" and "upon a predetermined condition associated with a computer program, projecting a second image, different from the first image." The Office Action implies that *Yang* projects different images because it projects light onto the surface "at first position of the mouse device" and "moving to a second position of the mouse device." (Office Action, pages 3-4). Applicants respectfully disagree. Projecting the exact same light pattern onto a surface at two different locations is not "projecting a second image, different from the first image," as recited in claim 1. The so-called 'image' projected by *Yang*, is light emitted from an unchanging light source through an unchanging imaging system, "so that an irradiated area having a desired size is produced and the light is uniformly irradiated onto the work surface." (*Yang*, col. 10, lines 16-18.) Applicants further note, as similarly discussed above, that if *Yang's* imaging system were to produce multiple different images, this feature would only serve to frustrate *Yang's* primary purpose of detecting cursor position and device movement across a surface. Accordingly, because *Yang* does not disclose "projecting a second image, different from the first image," claim 29 is also not anticipated by *Yang*. Claim 30 depends from claim 29 and is allowable for at least the same reasons.

Rejections under 35 U.S.C. § 103

Claims 3-8, 13-17, 20-23, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yang* in view of U.S. Patent No. 6,133,907 to Liu et al. (*Liu*). Claims 10, 27, and

28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yang*, in view of *Liu*, and further in view of U.S. Patent No. 6,882,331 to Wu (*Wu*).

In order to establish a *prima facie* case of obviousness under § 103(a), there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the primary reference or to combine the teachings of the references. See MPEP § 706.02(j). However, there is no motivation or suggestion to combine *Yang* with *Liu*. The Office Action states that it would have been obvious to combine the references to “in order to provide pointing device with different purposes, for example, advertisements or purposes of fashion.” However, as discussed in detail below, this purported motivation to combine references runs directly contrary to the primary purposes of *Yang*, and it is additionally unclear how an attempt to physically combine *Yang* with *Liu* would result in a device useful for these stated purposes.

As discussed above, *Yang* discloses a pen type optical mouse device that projects light onto a surface and then detects the light reflected back from the surface, in order to determine a cursor position and/or detect movement of the device across the surface. (Fig. 15; Fig. 19; Abstract; col. 4, line 60 to col. 5, line 4.) With respect claim 3, the Office Action states that it would have been obvious to incorporate “a light blocker having a light transmissive portion and a light blocking portion,” into *Yang*’s device. However, the recited light blocker would only make it more difficult for *Yang* to accurately detect the reflected light from the surface, and would thus frustrate *Yang*’s ability to detect cursor position and device movement. Similarly, with respect to claim 13, if *Yang*’s device were modified to incorporate “multiple predetermined image forming devices disposed within the housing, each image forming device producing a different displayed image,” *Yang*’s ability to accurately detect the reflected light from the surface would be impaired, making it more difficult to detect cursor position and device movement across the surface.

Additionally, if the devices of *Yang* and *Liu* were to be physically combined as suggested, the resulting device would not likely be useful for “different purposes, for example, for advertisements or purposes of fashion,” as suggested by the Office Action. *Yang*’s imaging system projects a narrow beam of light beneath the device. This beam of light would likely be too small to be useful for projecting advertising images or other user messages, and would also likely be obscured by the user’s hand or by the device itself. Thus, one skilled in the art would not have had

any expectation of success or any reason to modify or combine the references for the suggested purpose.

Finally, under § 103(a), the prior art references must also teach or suggest all the claim limitations. Claim 15 recites, “wherein the device for moving the image forming devices is configured to linearly move the image forming devices.” The Office Action implies, without explicitly stating, that linear movement of the image forming devices is disclosed in Fig. 2 and col. 2, lines 22-40 of *Liu*. However, *Liu* only discloses co-rotating a transparent disk with a shaft to project a motion picture on a remote wall (See, e.g., Abstract; FIGS. 2, 5; col. 1, lines 45-50), rather than moving image forming devices linearly. Thus, because *Liu* does not teach or suggest “wherein the device for moving the image forming devices is configured to linearly move the image forming devices,” Applicants submit that claim 15 is allowable over the proposed combination for this additional reason.

Conclusion

Based on the foregoing, Applicants respectfully submit that the application is in condition for allowance and a Notice to that effect is earnestly solicited. Should the Examiner believe that anything further is desirable in order to place the application in even better form for allowance, the Examiner is respectfully urged to contact Applicants’ undersigned representative at the below-listed number.

Respectfully submitted,
BANNER & WITCOFF, LTD.

Date: January 8, 2007

By: /Gary D. Fedorochko
Gary D. Fedorochko
Registration No. 35,509

1001 G Street, N.W.
Washington, D.C. 20001-4597
Tel: (202) 824-3160
Fax: (202) 824-3001